Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Spangler Ranch, LLC
P.O. Box 110
Ramsay, MT 59748

2. Type of action: Application to Change a Water Right, No. 76G 30049295

3. Water source name: Groundwater well and German Gulch, tributary to Silver Bow Creek

4. Location affected by project: NWNWSE Sec. 25, T4N, R10W, Deer Lodge County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to add groundwater points of diversion to five irrigation water right claims. The historic source for the claims is German Gulch, tributary to Silver Bow Creek. The proposal also seeks to leave an unprotected 1.5 cubic feet per second (CFS) and 267 acre-feet (AF) in an approximately 300 yard reach of German Gulch in Sec. 12, T3N, R10E, in order to reestablish a hydraulic connection between German Gulch and Silver Bow Creek. German Gulch hosts a westslope cutthroat trout fishery and the Applicant's representative, Trout Unlimited, seeks to enhance fish migration between German Gulch and the Upper Clark Fork River system during late summer low flow periods. The Applicant proposes to continue irrigation on 456 acres of the historic place of use, supplementing the German Gulch appropriations with groundwater from two new wells located in Sec. 25, T4N, R10W. At a maximum, the Applicant proposes to divert 9 CFS and 3,297 AF from German Gulch and 1.2 CFS and 214 AF from groundwater. The Applicant has shown that historically 1,066 acres of ground was irrigated by up to 60 CFS and 11,381 AF out of German Gulch. DNRC issuance of a change authorization would be conditioned to ensure that future water appropriations would not be made in excess of historic practices.

The DNRC shall issue a change authorization if the Applicant proves the criteria in 85-2-402, MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

- Montana Department of Natural Resources and Conservation
-James Heffner, Groundwater Hydrologist

- Montana Department of Fish, Wildlife and Parks
- Montana Natural Heritage Program
- Montana Department of Environmental Quality
- United States Fish and Wildlife Service

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Montana Department of Fish, Wildlife and Parks (FWP) does not identify German Gulch as a chronically dewatered stream (2003 Dewatered Stream List). The proposed action will add up to 1.5 CFS of unprotected instream flow to German Gulch. Historic water use practices often diverted the entire flow of German Gulch, leaving no surface water connection with Silver Bow Creek.

Determination: No impact.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The Montana Department of Environmental Quality 303(d) list for German Gulch identifies arsenic, cyanide and selenium as probable water quality impairments in the source. The identified water quality category is 4A, meaning that all TMDLs needed have been completed. The selenium impairment probably is due to abandoned mines and placer mining. No probable sources are identified for the arsenic or cyanide. The addition of flow to the lower-most reach of the source will not degrade existing water quality. Additionally, the introduction of groundwater produced by the wells should improve overall water quality in the localized area.

Determination: No impact.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The project seeks to add two groundwater points of diversion to their irrigation infrastructure. The wells are located in an alluvial intermontane aquifer approximately 0.75 miles from Silver Bow Creek, the nearest perennial surface water source. The wells are not located in a controlled groundwater area and no water quality issues are anticipated.

The modeled zone of influence due to pumping of the wells has a radius of approximately 4,000 feet. The zone of influence is expected to reasonably stabilize at the Silver Bow Creek

hydrologic boundary. Aquifer model analysis indicates that the maximum drawdown in the zone of influence will range from 1.5 to 4.3 feet. The Applicant conservatively analyzed adverse effects to other groundwater appropriations by assuming a maximum drawdown of 5 feet. The available water column in the six wells associated with water rights in the zone of influence ranges from 20 to 123 feet.

Impacts to surface water flows will largely be offset by water left instream. The project proposes to divert up to 1.2 CFS from groundwater, while leaving at least 1.5 CFS instream. Net accretions to surface water will occur in regards to historic use. Furthermore, the total diverted and consumed volumes are far less than historic use practices.

Determination: No impact.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The proposed diversion works consist of two wells located within close proximity of each other on land owned by the Applicant. No riparian areas or wetlands are located near the wells. The wells were completed by licensed drillers in accordance with the Montana Board of Water Well Contractors.

Determination: No impact.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The intent of the project is to improve the migration of westslope cutthroat trout between the German Gulch fishery and the upper Clark Fork River system. The Montana Natural Heritage Program was queried regarding potential species of concern in the vicinity of the project. The search returned five species of concern (see DNRC application file). The species of concern are: westslope cutthroat trout (*Oncorhynchus clarkia lewisi*), great blue heron (*Ardea herodias*), Preble's shrew (*Sorex preblei*), horay bat (*Lasiurus cinereus*), and wolverine (*Gulo gulo*). As stated above, the project intends to enhance westslope cutthroat trout fisheries and no impacts are anticipated regarding the other species of concern.

The U.S. Fish & Wildlife Service and the MT Department of Fish, Wildlife & Parks were contacted regarding this project but provided no response.

Determination: No impact.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

No wetlands are located in the vicinity of the proposed project.

Determination: No impact.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

No ponds are associated with the proposed project.

Determination: No impact.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Return flow rates will decrease from historic levels following completion of the proposed project. The timing and location of return flows will remain the same. Irrigation will continue as was historically practiced on ground where no salinity issues are recognized.

The project area was inundated with arsenic-laden floodwaters over 100 years ago, rendering much of the ground irrigated at the time unusable. The currently irrigated 456 acres includes land not impacted by the toxic floodwaters and approximately 50 acres which were reclaimed for agricultural use with soil amendments. The addition of groundwater to the irrigation system should not affect the existing soil conditions.

Determination: No impact.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

The wells proposed for irrigation use have already been completed and no vegetative cover or noxious weeds issues have been reported. Any disturbances caused by well drilling would have been minor and of a short duration. No vegetative species of concern were identified by the Montana Natural Heritage Program.

Determination: No impact.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: N/A

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

The project is not located on state or federal land. The project area is private land that has been used for agriculture for over 125 years.

Determination: No impact.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

No other demands have been identified.

Determination: N/A

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

There are no zoning or related issues associated with the project.

Determination: N/A

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The project is located on private land. No effects to recreational activities can occur.

Determination: No impact.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

The project is located on private, rural agricultural land. Land use practices will remain unchanged.

Determination: No impact.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: N/A

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No impact.

(b) *Local and state tax base and tax revenues?* No impact.

(c) *Existing land uses?* No impact.

(d) *Quantity and distribution of employment?* No impact.

(e) *Distribution and density of population and housing?* N/A

(f) *Demands for government services?* No impact.

(g) *Industrial and commercial activity?* N/A

(h) *Utilities?* No impact.

(i) *Transportation?* No impact.

(j) *Safety?* No impact.

(k) *Other appropriate social and economic circumstances?* No impact.

Secondary and cumulative impacts on the physical environment and human population:

Secondary Impacts

No secondary impacts have been identified.

Cumulative Impacts

The project is located near significant Superfund remediation activity. Irrigation of private property as proposed by the project will remain unchanged. The addition of groundwater to the local hydrologic system should only improve the general environmental quality of the area.

Describe any mitigation/stipulation measures:

The application will go through the DNRC public notice process, water users concerned with the potential impacts will have the opportunity to object to the proposed actions. The final decision by the DNRC to grant (or deny) the application would not be made until all review processes are completed.

Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:

The no action alternative would prevent the Applicant from using the groundwater wells. The wells would provide the Applicant with the flexibility to leave formerly appropriated flows in German Gulch during dry periods to enhance westslope cutthroat trout fisheries.

PART III. Conclusion

Preferred Alternative

Implement project as proposed, or in some reasonable modified form.

Comments and Responses

None.

Based on the significance criteria evaluated in this EA, is an EIS required?
Finding: *Yes___ No_**X**_*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action:

The proposed project would have no significant adverse environmental impact.

Name of person(s) responsible for preparation of EA:

***Name**:* Bryan Gartland
***Title**:* DNRC, Hydrologist / Water Resource Specialist
Date: May 9, 2012